onnecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1800exs

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2	Jan 25	BLAST(R) searching in REGISTRY available in STN on the Web
NEWS 3	Jan 29	FSTA has been reloaded and moves to weekly updates
NEWS 4	Feb 01	DKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 5	Feb 19	Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6	Mar 08	Gene Names now available in BIOSIS
NEWS 7	Mar 22	TOXLIT no longer available
NEWS 8	Mar 22	TRCTHERMO no longer available
NEWS 9	Mar 28	US Provisional Priorities searched with P in CA/CAplus and USPATFULL
NEWS 10	Mar 28	LIPINSKI/CALC added for property searching in REGISTRY
NEWS 11	Apr 02	PAPERCHEM no longer available on STN. Use PAPERCHEM2 instead.
NEWS 12	Apr 08	"Ask CAS" for self-help around the clock
NEWS 13	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 14	Apr 09	ZDB will be removed from STN
NEWS 15	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 16	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 17	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 18	Apr 22	Federal Research in Progress (FEDRIP) now available

NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 18:06:14 ON 23 APR 2002

=> fil .eliz

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'MEDLINE' ENTERED AT 18:06:34 ON 23 APR 2002

FILE 'SCISEARCH' ENTERED AT 18:06:34 ON 23 APR 2002

COPYRIGHT (C) 2002 Institute for Scientific Information (ISI) (R

FILE 'LIFESCI' ENTERED AT 18:06:34 ON 23 APR 2002
COPYRIGHT (C) 2002 Cambridge Scientific Abstracts (CSA)

FILE 'BIOTECHDS' ENTERED AT 18:06:34 ON 23 APR 2002
COPYRIGHT (C) 2002 THOMSON DERWENT AND INSTITUTE FOR SCIENTIFIC INFORMATION

FILE 'BIOSIS' ENTERED AT 18:06:34 ON 23 APR 2002
COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'EMBASE' ENTERED AT 18:06:34 ON 23 APR 2002
COPYRIGHT (C) 2002 Elsevier Science B.V. All rights reserved.

FILE 'HCAPLUS' ENTERED AT 18:06:34 ON 23 APR 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'NTIS' ENTERED AT 18:06:34 ON 23 APR 2002
Compiled and distributed by the NTIS, U.S. Department of Commerce.
It contains copyrighted material.
All rights reserved. (2002)

FILE 'ESBIOBASE' ENTERED AT 18:06:34 ON 23 APR 2002
COPYRIGHT (C) 2002 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'BIOTECHNO' ENTERED AT 18:06:34 ON 23 APR 2002
COPYRIGHT (C) 2002 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'WPIDS' ENTERED AT 18:06:34 ON 23 APR 2002
COPYRIGHT (C) 2002 DERWENT INFORMATION LTD

=> s mitocarrier or mitochondria? carrier
L1 1292 MITOCARRIER OR MITOCHONDRIA? CARRIER

=> s l1 (10a)(motif or consensus)
L2 69 L1 (10A)(MOTIF OR CONSENSUS)

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3 11 DUP REM L2 (58 DUPLICATES REMOVED)

=> d 1-11

L3 ANSWER 1 OF 11 MEDLINE DUPLICATE 1
AN 2002221400 IN-PROCESS
DN 21956292 PubMed ID: 11959030
TI Canine mitochondrial uncoupling proteins: structure and mRNA expression of three isoforms in adult beagles.
AU Ishioka Katsumi; Kanehira Katsushi; Sasaki Noriyasu; Kitamura Hiroshi; Kimura Kazuhiro; Saito Masayuki
CS Laboratory of Biochemistry, Department of Biomedical Sciences, Graduate School of Veterinary Medicine, Hokkaido University, 060-0818, Sapporo, Japan.
SO COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY. PART B, BIOCHEMISTRY AND MOLECULAR BIOLOGY, (2002 Mar) 131 (3) 483-9.
Journal code: 9516061. ISSN: 1096-4959.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20020418
Last Updated on STN: 20020418

L3 ANSWER 2 OF 11 MEDLINE DUPLICATE 2
AN 2001542772 MEDLINE
DN 21450584 PubMed ID: 11566871

TI Citrin and aralar1 are Ca(-stimulated aspartate/glutamat[redacted]ransporters in mitochondria.
AU Palmieri L; Pardo B; Lasorsa F M; del Arco A; Kobayashi K; Iijima M; Runswick M J; Walker J E; Saheki T; Satrustegui J; Palmieri F
CS Department of Pharmaco-Biology, University of Bari, Via Orabona 4, 70125 Bari, Italy.
SO EMBO JOURNAL, (2001 Sep 17) 20 (18) 5060-9.
Journal code: EMB; 8208664. ISSN: 0261-4189.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200110
ED Entered STN: 20011010
Last Updated on STN: 20011029
Entered Medline: 20011025

L3 ANSWER 3 OF 11 MEDLINE DUPLICATE 3
AN 2002110256 MEDLINE
DN 21833809 PubMed ID: 11845285
TI Rapid decrease of RNA level of a novel mouse mitochondria solute carrier protein (Mscp) gene at 4-5 weeks of age.
AU Li Q Z; Eckenrode S; Ruan Q G; Wang C Y; Shi J D; McIndoe R A; She J X
CS Department of Pathology, Immunology and Laboratory Medicine, Box 100275, Center for Mammalian Genetics, and Diabetes Center of Excellence, College of Medicine, University of Florida, Gainesville, Florida 32610, USA.
NC 1P01AI-42288 (NIAID)
1R01HD37800 (NICHD)
1R24DK58778 (NIDDK)
SO MAMMALIAN GENOME, (2001 Nov) 12 (11) 830-6.
Journal code: 9100916. ISSN: 0938-8990.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-AF288621; GENBANK-AF361699
EM 200204
ED Entered STN: 20020215
Last Updated on STN: 20020423
Entered Medline: 20020422

L3 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:384225 HCAPLUS
DN 133:39111
TI Cloning and cDNA sequences of a novel human and mouse uncoupling proteins UCP5 and therapeutic uses
IN Adams, Sean; Pan, James
PA Genentech, Inc., USA
SO PCT Int. Appl., 90 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000032624	A2	20000608	WO 1999-US25947	19991103
WO 2000032624	A3	20001109		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1135496	A2	20010926	EP 1999-973036	19991103

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI US 1998-110286P P 19[redacted]30
US 1999-129583P P 19990416
US 1999-143886P P 19990715
WO 1999-US25947 W 19991103

L3 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:702965 HCAPLUS
DN 134:142575
TI Isolation and characterization of cDNAs encoding mitochondrial uncoupling proteins in wheat: wheat UCP genes are not regulated by low temperature
AU Murayama, S.; Handa, H.
CS Laboratory of Plant Genecology, Hokkaido National Agricultural Experiment Station, Sapporo, 062-8555, Japan
SO Molecular and General Genetics (2000), 264(1-2), 112-118
CODEN: MGGEAE; ISSN: 0026-8925
PB Springer-Verlag
DT Journal
LA English
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 11 MEDLINE DUPLICATE 4
AN 1999299208 MEDLINE
DN 99299208 PubMed ID: 10369894
TI The acuH gene of Aspergillus nidulans, required for growth on acetate and long-chain fatty acids, encodes a putative homologue of the mammalian carnitine/acylcarnitine carrier.
AU De Lucas J R; Dominguez A I; Valenciano S; Turner G; Laborda F
CS Departamento de Microbiologia y Parasitologia, Facultad de Farmacia, Universidad de Alcala, Ctra. Madrid-Barcelona Km 33, E-28871 Alcala de Henares (Madrid), Spain.
SO ARCHIVES OF MICROBIOLOGY, (1999 May-Jun) 171 (6) 386-96.
Journal code: 7YN; 0410427. ISSN: 0302-8933.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-AJ011563
EM 199907
ED Entered STN: 19990730
Last Updated on STN: 19990730
Entered Medline: 19990722

L3 ANSWER 7 OF 11 MEDLINE DUPLICATE 5
AN 1999358754 MEDLINE
DN 99358754 PubMed ID: 10431807
TI Assessment of uncoupling activity of the human uncoupling protein 3 short form and three mutants of the uncoupling protein gene using a yeast heterologous expression system.
AU Hagen T; Zhang C Y; Slieker L J; Chung W K; Leibel R L; Lowell B B
CS Department of Medicine, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, MA 02215, USA.
NC DK49569 (NIDDK)
DK52431 (NIDDK)
SO FEBS LETTERS, (1999 Jul 9) 454 (3) 201-6.
Journal code: EUH; 0155157. ISSN: 0014-5793.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199908
ED Entered STN: 19990910
Last Updated on STN: 19990910
Entered Medline: 19990826

L3 ANSWER 8 OF 11 MEDLINE DUPLICATE 6
AN 1999295931 MEDLINE
DN 99295931 PubMed ID: 10369257
TI The gene mutated in adult-onset type II citrullinaemia encodes a putative

mitochondrial carrier prot
AU Kobayashi K; Sinasac D S; Iijima M; Boright A P; Begum L; Lee J R; Yasuda T; Ikeda S; Hirano R; Terazono H; Crackower M A; Kondo I; Tsui L C; Scherer S W; Saheki T
CS Department of Biochemistry, Faculty of Medicine, Kagoshima University, Japan.. dodoko12@med2.kufm.kagoshima-u.ac.jp
SO NATURE GENETICS, (1999 Jun) 22 (2) 159-63.
Journal code: BRO; 9216904. ISSN: 1061-4036.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-AC002450; GENBANK-AC002540; GENBANK-AF001601; GENBANK-AF118838; GENBANK-L27624; GENBANK-M63012; GENBANK-R55737
EM 199906
ED Entered STN: 19990714
Last Updated on STN: 19990714
Entered Medline: 19990629

L3 ANSWER 9 OF 11 MEDLINE DUPLICATE 7
AN 1998181028 MEDLINE
DN 98181028 PubMed ID: 9514746
TI Highly conserved charge-pair networks in the mitochondrial carrier family.
AU Nelson D R; Felix C M; Swanson J M
CS Department of Biochemistry, The University of Tennessee, Memphis, TN 38163, USA.
NC R01-HL54248-02 (NHLBI)
SO JOURNAL OF MOLECULAR BIOLOGY, (1998 Mar 27) 277 (2) 285-308.
Journal code: J6V; 2985088R. ISSN: 0022-2836.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199806
ED Entered STN: 19980611
Last Updated on STN: 19980611
Entered Medline: 19980602

L3 ANSWER 10 OF 11 MEDLINE DUPLICATE 8
AN 1998446447 MEDLINE
DN 98446447 PubMed ID: 9773270
TI Sequencing of a gene encoding a member of the mitochondrial carrier family of transport proteins from Aspergillus nidulans.
AU Sun J; Rhodes J C; Askew D S
CS Department of Pathology & Laboratory Medicine, University of Cincinnati, OH 45267-0529, USA.
NC R29CA61909 (NCI)
SO DNA SEQUENCE, (1998 Mar) 9 (1) 1-8.
Journal code: A9H; 9107800. ISSN: 1042-5179.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-AF146189; GENBANK-U71603
EM 199812
ED Entered STN: 19990115
Last Updated on STN: 20000303
Entered Medline: 19981222

L3 ANSWER 11 OF 11 MEDLINE DUPLICATE 9
AN 96400914 MEDLINE
DN 96400914 PubMed ID: 8807290
TI Isolation and analysis of the arg-13 gene of Neurospora crassa.
AU Liu Q; Dunlap J C
CS Department of Biochemistry, Dartmouth Medical School, Hanover, New Hampshire 03755, USA.
NC GM-34985 (NIGMS)
MH-01186 (NIMH)
MH-44651 (NIMH)

SO GENETICS, (1996 Jul) 143 ([redacted]1163-74.
Journal code: FNH; 0374636. ISSN: 0016-6731.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-L36378
EM 199702
ED Entered STN: 19970219
Last Updated on STN: 19970219
Entered Medline: 19970206

=> d 1-11 ab

L3 ANSWER 1 OF 11 MEDLINE DUPLICATE 1
AB Uncoupling proteins (UCPs) are members of the mitochondrial transporter family that dissipate the proton gradient as heat more than via ATP synthesis. In the present study, nucleotide and amino acid sequences of UCPs 1, 2 and 3 of a dog were determined, and their mRNA expression in various peripheral tissues was examined. The sequences were highly (76-97%) homologous to those of other species. Although lower homologies (60-74%) were found when compared among the three canine UCPs, their deduced amino acid sequences had some common domains, such as three **mitochondrial carrier** protein **motifs**, six transmembrane alpha-helix domains, and putative purine nucleotide binding domains. By Northern blot analyses, UCP1 mRNA was not detected in any tissues examined. UCP2 mRNA was expressed in most tissues, particularly abundantly in adipose tissue, spleen and lung. Two sizes of UCP3 mRNA were found exclusively in heart and skeletal muscle. These results suggest that canine UCPs have uncoupling activity, and are involved in the regulation of metabolic heat production and/or energy expenditure, as do those of other species.

L3 ANSWER 2 OF 11 MEDLINE DUPLICATE 2
AB The mitochondrial aspartate/glutamate carrier catalyzes an important step in both the urea cycle and the aspartate/malate NADH shuttle. Citrin and aralar1 are homologous proteins belonging to the **mitochondrial carrier** family with EF-hand Ca(2+)-binding **motifs** in their N-terminal domains. Both proteins and their C-terminal domains were overexpressed in Escherichia coli, reconstituted into liposomes and shown to catalyze the electrogenic exchange of aspartate for glutamate and a H(+). Overexpression of the carriers in transfected human cells increased the activity of the malate/aspartate NADH shuttle. These results demonstrate that citrin and aralar1 are isoforms of the hitherto unidentified aspartate/glutamate carrier and explain why mutations in citrin cause type II citrullinemia in humans. The activity of citrin and aralar1 as aspartate/glutamate exchangers was stimulated by Ca(2+) on the external side of the inner mitochondrial membrane, where the Ca(2+)-binding domains of these proteins are localized. These results show that the aspartate/glutamate carrier is regulated by Ca(2+) through a mechanism independent of Ca(2+) entry into mitochondria, and suggest a novel mechanism of Ca(2+) regulation of the aspartate/malate shuttle.

L3 ANSWER 3 OF 11 MEDLINE DUPLICATE 3
AB We cloned a novel mouse gene that encodes a protein with homology to the mitochondria solute carrier proteins (Mscp). The major full-length Mscp transcript contains 4112 bp of cDNA and a deduced protein of 338 amino acids. The Mscp protein shares 50%, 40%, and 39% sequence identity with the C. elegans hypothetical protein T26089 and the yeast mitochondria carrier proteins MRS3 and MRS4, respectively. It also showed homology with the uncoupling proteins (UCP1, UCP2, and UCP3; 22%, 24%, and 29% identity, respectively). The protein has six transmembrane domains and three mitochondria energy-transfer protein signature **motifs**, which are conserved among all the members of **mitochondria carrier** protein family. Northern analysis indicated that the Mscp gene is highly expressed in the spleen. Using cDNA microarray and Northern analysis, we have shown a significant decrease of the splenic Mscp mRNA levels around 4-5 weeks of age in several mouse strains including C57BL/6J, nonobese

diabetic (NOD), and several NOD-congenic mice. These results suggest that the Mscp gene is decreased during splenic lymphocyte maturation in these mice.

L3 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AB A cDNA clone (DNA-80562-1663) has been identified, that encodes a novel protein having homol. to known human uncoupling proteins. The protein of invention was designated as "uncoupling protein 5" or "UCP5". A signal peptide, a tyrosine kinase phosphorylation site, N-myristoylation sites, three **mitochondrial carrier** protein **motifs** were identified in UCP5. Three human isoforms of UCP5 (UCP5L, UCP5S, and UCP5SI) were identified, as well as two mouse isoforms (UCP5L and UCP5S). The human UCP5 gene has been mapped to chromosome X (q23-q25). Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide mols. comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention, and methods for producing the polypeptides of the present invention.

L3 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AB Uncoupling proteins (UCP) found in the inner mitochondrial membrane of mammals dissipate the proton electrochem. gradient across the inner membrane to produce heat rather than synthesize ATP. Using PCR-based methods, we isolated two novel cDNA clones, WhUCP1a and WhUCP1b, that encode the mitochondrial uncoupling protein of wheat (Triticum aestivum L.). The cDNA clones each contain one ORF which can code for a protein of 286 amino acids with a predicted mol. mass of about 30.5 kDa, although three amino acid substitutions are found between them. The deduced amino acid sequences each possess three typical mitochondrial carrier signature domains and six membrane-spanning domains which are highly conserved in the mitochondrial transporter family. Southern anal. suggested that the WhUCP1 gene may be present in as many as three copies in the wheat genome, and also that WhUCP proteins may be encoded by a small multigene family. Northern anal. revealed that the steady-state level of the WhUCP1 mRNA is quite low. Quant. RT-PCR clearly showed that expression of the WhUCP1 gene in wheat seedlings is insensitive to low temp. Our data suggest that WhUCP1 might have functions other than low temp.-induced thermogenesis, although WhUCP1 possesses all the typical features reported for known UCPs.

L3 ANSWER 6 OF 11 MEDLINE DUPLICATE 4
AB The Aspergillus nidulans acuH gene, required for growth on acetate and long-chain fatty acids, was cloned by complementation of the acuH13 mutation. Northern blotting analysis showed that transcription of the acuH gene occurs in acetate-grown mycelium and at higher levels in oleate-grown mycelium, but not during growth on glucose minimal medium. The acuH gene encodes a protein of 326 amino acids that belongs to the mitochondrial carrier family. The ACUH protein contains three related segments of approximately 100 amino acids in length, each segment comprising two hydrophobic domains that are probably folded into two transmembrane alpha-helices linked by an extensive polar region. Sequence comparisons suggest that the acuH gene of A. nidulans encodes the homologue of the carnitine/acylcarnitine carrier of rat and man. The uncharacterised proteins YOR100C of Saccharomyces cerevisiae, COLT of Drosophila melanogaster, and DIF-1 of Caenorhabditis elegans also seem to be homologues of ACUH. In addition to the **motifs** present in all members of the **mitochondrial carrier** family, we propose the highly conserved **motif** R(A,S)(V,F)PANAA(T,C)F within the sixth hydrophobic domain of these proteins as the characteristic feature of the carnitine carrier subfamily. The proposed function of the ACUH protein is the transport of acetylcarnitine molecules from the cytosol to the mitochondrial matrix, a process required during growth on acetate or on long-chain fatty acids.

L3 ANSWER 7 OF 11 MEDLINE DUPLICATE 5
AB The human uncoupling protein 3 gene generates two mRNA transcripts, uncoupling protein 3L and uncoupling protein 3S, which are predicted to encode long and short forms of the uncoupling protein 3 protein, respectively. While uncoupling protein 3L is similar in length to the

other known uncoupling proteins, uncoupling protein 3S lacks the last 37 C-terminal residues. A splice site mutation in the human uncoupling protein 3 gene, resulting in the exclusive expression of uncoupling protein 3S, and a number of point mutations in the uncoupling protein 3 gene have been described. This study compares the biochemical activity of uncoupling protein 3S as well as three mutants of the uncoupling protein 3 gene (V9M, V102I, R282C) with that of uncoupling protein 3L utilizing a yeast expression system. All proteins were expressed at similar levels and had qualitatively similar effects on parameters related to the uncoupling function. Both uncoupling protein 3S and uncoupling protein 3L decreased the yeast growth rate by 35 and 52%, increased the whole yeast basal O2 consumption by 26 and 48%, respectively, and decreased the mitochondrial membrane potential as measured in whole yeast by uptake of the fluorescent potential-sensitive dye 3'3-dihexyloxacarbocyanine iodide. In isolated mitochondria, uncoupling protein 3S and uncoupling protein 3L caused a similar (33 and 35%, respectively) increase in state 4 respiration, which was relatively small compared to uncoupling protein 1 (102% increase). A truncated version of uncoupling protein 3S, lacking the last three C-terminal residues, Tyr, Lys and Gly, that are part of a carrier **motif** that is highly conserved among all **mitochondrial carriers**, had a greatly reduced uncoupling activity. The two naturally occurring uncoupling protein 3 mutants, V9M and V102I, were similar to uncoupling protein 3L with respect to effects on the yeast growth and whole yeast O2 consumption. The R282C mutant had a reduced effect compared to uncoupling protein 3L. In summary, uncoupling protein 3S and the three mutants of uncoupling protein 3 appear to be functional proteins with biochemical activities similar to uncoupling protein 3L, although uncoupling protein 3S and the R282C mutant have a modestly reduced function.

L3 ANSWER 8 OF 11 MEDLINE DUPLICATE 6

AB Citrullinaemia (CTLN) is an autosomal recessive disease caused by deficiency of argininosuccinate synthetase (ASS). Adult-onset type II citrullinaemia (CTLN2) is characterized by a liver-specific ASS deficiency with no abnormalities in hepatic ASS mRNA or the gene ASS (refs 1-17). CTLN2 patients (1/100,000 in Japan) suffer from a disturbance of consciousness and coma, and most die with cerebral edema within a few years of onset. CTLN2 differs from classical citrullinaemia (CTLN1, OMIM 215700) in that CTLN1 is neonatal or infantile in onset, with ASS enzyme defects (in all tissues) arising due to mutations in ASS on chromosome 9q34 (refs 18-21). We collected 118 CTLN2 families, and localized the CTLN2 locus to chromosome 7q21.3 by homozygosity mapping analysis of individuals from 18 consanguineous unions. Using positional cloning we identified a novel gene, SLC25A13, and found five different DNA sequence alterations that account for mutations in all consanguineous patients examined. SLC25A13 encodes a 3.4-kb transcript expressed most abundantly in liver. The protein encoded by SLC25A13, named citrin, is bipartite in structure, containing a **mitochondrial carrier motif** and four EF-hand domains, suggesting it is a calcium-dependent mitochondrial solute transporter with a role in urea cycle function.

L3 ANSWER 9 OF 11 MEDLINE DUPLICATE 7

AB Selection for regain-of-function mutations in the yeast ADP/ATP carrier AAC2 has revealed an unexpected series of charge-pairs. Four of the six amino acids involved are found in the mitochondrial energy transfer motifs used to define this family of proteins. As such, the results found with the ADP/ATP carrier may apply to the family as a whole. **Mitochondrial carriers** are built from three homologous domains, each with the conserved **motif** PX(D,E)XX(K,R). Neutralization of the conserved positive charges at K48, R152 or R252 in these motifs results in respiration defective yeast. Neutralization of the negative charges at D149 and D249 also make respiration defective yeast, though E45G or E45Q mutants are able to grow on glycerol. Regain of function occurs when a complementary charge is lost from another site in the molecule. This phenomenon has been observed independently eight times and thus is strong evidence for charge-pairs existing between the affected residues. Five different charge-pairs have been detected in the yeast AAC2 by this method and three more can be predicted based on homology between

the domains. The highly conserved charge-pairs occurring within or between the three mitochondrial energy transfer signatures seem to be a critical feature of mitochondrial carrier structure, independent of the substrates transported. Conformational switching between alternative charge-pairs may constitute part of the basis for transport.

L3 ANSWER 10 OF 11 MEDLINE DUPLICATE 8
AB Mitochondrial carrier proteins comprise a superfamily of evolutionarily conserved proteins that regulate the specific transport of essential metabolites across the mitochondrial membranes. In this report we describe the cloning and sequencing of a gene from Aspergillus nidulans, amc-1, that encodes the first reported example of a mitochondrial carrier protein in Aspergillus species. The amc-1 gene is located on chromosome 7, and is transcribed as a 1.6 kb unspliced polyadenylated RNA. The predicted translation product of the amc-1. cDNA displays three tandemly repeated domains which possess protein signature **motifs** that are characteristic of **mitochondrial carrier** proteins that localize to the inner mitochondrial membrane. amc-1 shares the greatest similarity with a Neurospora mitochondrial carrier protein that is implicated in basic amino acid transport, suggesting that the amc-1 protein may provide a related function.

L3 ANSWER 11 OF 11 MEDLINE DUPLICATE 9
AB Mutations in arg-13 result in slow growth in minimal medium and can suppress mutations in carbamyl phosphate synthase-aspartate carbamyl transferase within the pyrimidine pathway; the exact biochemical function of the gene product is unknown. To understand the role of arg-13 in arginine metabolism, cosmids rescuing growth in arg-13 mutants were cloned and mapped to the position of arg-13 on LG IR. Northern analysis showed the arg-13 message to contain approximately 2100 nt, although a 1.4-kb genomic fragment truncated at the 5' and 3' ends of the gene encodes a shortened transcript that can rescue arg-13 function. Expression of mRNA arising from the mutant arg-13 gene is induced by arginine starvation, although wild type (arg-13+) is not derepressed in minimal medium. The sequence of the arg-13 gene shows ARG-13 to be a member of the mitochondrial carrier superfamily with three repeats of a approximately 100-amino acid domain, six putative membrane spanning regions, and three copies of the **mitochondrial carrier consensus** pattern. This information plus available and new nutritional data are consistent with the hypothesis that arg-13 encodes a mitochondrial basic amino acid carrier whose existence was predicted based upon previous physiological, nutritional and biochemical data.

```
=> s l1 (10a)(motif or consensus) and review
L4            0 L1 (10A)(MOTIF OR CONSENSUS) AND REVIEW

=> s l1 and review
L5          125 L1 AND REVIEW

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6           67 DUP REM L5 (58 DUPLICATES REMOVED)

=> d 1-10

L6   ANSWER 1 OF 67  EMBASE  COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN   2002018504  EMBASE
TI   Uncoupling proteins - How do they work and how are they regulated.
AU   Klingenberg M.
CS   M. Klingenberg, Institute of Physical Biochemistry, University of Munich,
     Schillerstrasse 44, D-80336 Munich, Germany. klingenberg@pbm.med.uni-
     muenchen.de
SO   IUBMB Life, (2002) 52/3-5 (175-179).
     Refs: 40
     ISSN: 1521-6543  CODEN: IULIF8
CY   United States
DT   Journal; General Review
```

FS 029 Clinical Biochemis
LA English
SL English

L6 ANSWER 2 OF 67 SCISEARCH COPYRIGHT 2002 ISI (R)
AN 2002:291039 SCISEARCH
GA The Genuine Article (R) Number: 536LJ
TI Uncoupling protein-2: evidence for its function as a metabolic regulator
AU Saleh M C; Wheeler M B; Chan C B (Reprint)
CS Univ Prince Edward Isl, Dept Anat & Physiol, 550 Univ Ave, Charlottetown, PE C1A 4P3, Canada (Reprint); Univ Prince Edward Isl, Dept Anat & Physiol, Charlottetown, PE C1A 4P3, Canada; Univ Toronto, Dept Physiol & Med, Toronto, ON, Canada
CYA Canada
SO DIABETOLOGIA, (FEB 2002) Vol. 45, No. 2, pp. 174-187.
Publisher: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010 USA.
ISSN: 0012-186X.
DT General Review; Journal
LA English
REC Reference Count: 149
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L6 ANSWER 3 OF 67 MEDLINE
AN 2002117668 IN-PROCESS
DN 21839590 PubMed ID: 11850613
TI Mitochondrial uncoupling proteins in human physiology and disease.
AU Hagen T; Vidal-Puig A
CS The Wolfson Institute for Biomedical Research, University College London, London, UK.
SO MINERVA MEDICA, (2002 Feb) 93 (1) 41-57.
Journal code: 0400732. ISSN: 0026-4806.
CY Italy
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20020220
Last Updated on STN: 20020220

L6 ANSWER 4 OF 67 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 1
AN 2001299507 EMBASE
TI Uncoupling proteins: Functional characteristics and role in the pathogenesis of obesity and Type II diabetes.
AU Dalgaard L.T.; Pedersen O.
CS Dr. O. Pedersen, Steno Diabetes Center, Niels Steensens Vej 2, DK-2820 Gentofte, Denmark. olufp@dadlnet.dk
SO Diabetologia, (2001) 44/8 (946-965).
Refs: 177
ISSN: 0012-186X CODEN: DBTGAJ
CY Germany
DT Journal; General Review
FS 003 Endocrinology
005 General Pathology and Pathological Anatomy
029 Clinical Biochemistry
LA English
SL English

L6 ANSWER 5 OF 67 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:924835 HCAPLUS
DN 136:164469
TI Perspectives on the biology of uncoupling protein (UCP) homologues
AU Adams, S. H.; Pan, G.; Yu, X. X.
CS Department of Endocrinology, Genentech, Inc., South San Francisco, CA, 94080, USA
SO Biochemical Society Transactions (2001), 29(6), 798-802
CODEN: BCSTB5; ISSN: 0300-5127
PB Portland Press Ltd.
DT Journal; General Review
LA English
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVA LE IN THE RE FORMAT

L6 ANSWER 6 OF 67 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:52165 HCAPLUS
DN 136:162791
TI Uncoupling proteins-how do they work and how are they regulated
AU Klingenberg, Martin
CS Institute of Physical Biochemistry, University of Munich, Munich, D-80336, Germany
SO IUBMB Life (2001), 52(3,4,5), 175-179
CODEN: IULIF8; ISSN: 1521-6543
PB Taylor & Francis
DT Journal; General Review
LA English
RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 67 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:360606 HCAPLUS
DN 134:362826
TI Uncoupling proteins in mitochondria of plants and some microorganisms
AU Jarmuszkiewicz, Wieslawa
CS Department of Bioenergetics, Institute of Molecular Biology and Biotechnology, Adam Mickiewicz University, Poznan, 61-701, Pol.
SO Acta Biochimica Polonica (2001), 48(1), 145-155
CODEN: ABPLAF; ISSN: 0001-527X
PB Polish Biochemical Society
DT Journal; General Review
LA English
RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 67 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 2
AN 2001300194 EMBASE
TI Uncoupling proteins: Their roles in adaptive thermogenesis and substrate metabolism reconsidered.
AU Dulloo A.G.; Samec S.
CS Dr. A.G. Dulloo, Institute of Physiology, Department of Medicine, University of Fribourg, Rue du Musee 5, Fribourg, Switzerland. abdul.dulloo@unifr.ch
SO British Journal of Nutrition, (2001) 86/2 (123-139).
Refs: 105
ISSN: 0007-1145 CODEN: BJNUAV
CY United Kingdom
DT Journal; General Review
FS 029 Clinical Biochemistry
017 Public Health, Social Medicine and Epidemiology
022 Human Genetics
LA English
SL English

L6 ANSWER 9 OF 67 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 3
AN 2001083192 EMBASE
TI Physiological regulation of the transport activity in the uncoupling proteins UCP1 and UCP2.
AU Rial E.; Gonzalez-Barroso M.M.
CS E. Rial, Centro de Investigaciones Biologicas, CSIC, Velazquez 144, 28006 Madrid, Spain. rial@cib.csic.es
SO Biochimica et Biophysica Acta - Bioenergetics, (1 Mar 2001) 1504/1 (70-81).
Refs: 112
ISSN: 0005-2728 CODEN: BBBEB4
PUI S 0005-2728(00)00240-1
CY Netherlands
DT Journal; General Review
FS 002 Physiology
029 Clinical Biochemistry
LA English
SL English

L6 ANSWER 10 OF 67 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 4
AN 2000116462 EMBASE
TI Uncoupling protein homologs: Emerging views of physiological function.
AU Adams S.H.
CS S.H. Adams, Department of Endocrinology, Genentech, Incorporated, South San Francisco, CA 94080, United States
SO Journal of Nutrition, (2000) 130/4 (711-714).
Refs: 57
ISSN: 0022-3166 CODEN: JONUAI
CY United States
DT Journal; General Review
FS 029 Clinical Biochemistry
LA English
SL English

=> s l6 and py>1996
6 FILES SEARCHED...
9 FILES SEARCHED...
L7 29 L6 AND PY>1996

=> d 1-10

L7 ANSWER 1 OF 29 MEDLINE
AN 2002117668 IN-PROCESS
DN 21839590 PubMed ID: 11850613
TI Mitochondrial uncoupling proteins in human physiology and disease.
AU Hagen T; Vidal-Puig A
CS The Wolfson Institute for Biomedical Research, University College London, London, UK.
SO MINERVA MEDICA, **(2002 Feb)** 93 (1) 41-57.
Journal code: 0400732. ISSN: 0026-4806.
CY Italy
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20020220
Last Updated on STN: 20020220

L7 ANSWER 2 OF 29 MEDLINE
AN 2001120016 MEDLINE
DN 21079845 PubMed ID: 11212326
TI Plant **mitochondrial carriers**: an overview.
AU Laloi M
CS University of Oxford, Department of Plant Sciences, UK..
Maryse.laloi@rdto.nestle.com
SO CELLULAR AND MOLECULAR LIFE SCIENCES, **(1999 Dec)** 56 (11-12) 918-44. Ref: 226
Journal code: CLE; 9705402. ISSN: 1420-682X.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Priority Journals
EM 200102
ED Entered STN: 20010322
Last Updated on STN: 20010618
Entered Medline: 20010215

L7 ANSWER 3 OF 29 MEDLINE
AN 2000324804 MEDLINE
DN 20324804 PubMed ID: 10868929
TI Uncoupling proteins 2 and 3: potential regulators of mitochondrial energy metabolism.
AU Boss O; Hagen T; Lowell B B
CS Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, USA.

SO DIABETES, **(2000 Feb)** 49 (2 3-56. Ref: 182
Journal code: E8X; 0372763. ISSN: 0012-1797.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 200007
ED Entered STN: 20000714
Last Updated on STN: 20000714
Entered Medline: 20000706

L7 ANSWER 4 OF 29 MEDLINE
AN 2000117195 MEDLINE
DN 20117195 PubMed ID: 10653470
TI Contribution to the identification and analysis of the mitochondrial uncoupling proteins.
AU Ricquier D; Miroux B; Cassard-Doulcier A M; Levi-Meyrueis C; Gelly C; Raimbault S; Bouillaud F
CS Centre de Recherche sur l'Endocrinologie Moleculaire et le Developpement, Centre National de la Recherche Scientifique-Unit 9078, Meudon, France.. ricquier@infobiogen.fr
SO JOURNAL OF BIOENERGETICS AND BIOMEMBRANES, **(1999 Oct)** 31 (5) 407-18. Ref: 85
Journal code: HIO; 7701859. ISSN: 0145-479X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000320
Last Updated on STN: 20000320
Entered Medline: 20000306

L7 ANSWER 5 OF 29 MEDLINE
AN 2000073752 MEDLINE
DN 20073752 PubMed ID: 10605819
TI The mitochondrial uncoupling protein-2: current status.
AU Fleury C; Sanchis D
CS CEREMOD CNRS UPR 9078, Meudon, France.. cfleury@genetique.uvsq.fr
SO INTERNATIONAL JOURNAL OF BIOCHEMISTRY AND CELL BIOLOGY, **(1999 Nov)** 31 (11) 1261-78. Ref: 99
Journal code: CDK; 9508482. ISSN: 1357-2725.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200002
ED Entered STN: 20000218
Last Updated on STN: 20000218
Entered Medline: 20000207

L7 ANSWER 6 OF 29 MEDLINE
AN 2000072870 MEDLINE
DN 20072870 PubMed ID: 10603473
TI Protein translocation into mitochondria: the role of TIM complexes.
AU Bauer M F; Hofmann S; Neupert W; Brunner M
CS Institut fur Klinische Chemie, Molekulare Diagnostik und Institut fur Klinische Chemie, Akad. Krankenhaus Munchen-Schwabing, D-80804 Munchen, Germany.. bauer@bio.med.uni-muenchen.de
SO TRENDS IN CELL BIOLOGY, **(2000 Jan)** 10 (1) 25-31. Ref: 57
Journal code: C5K; 9200566. ISSN: 0962-8924.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200001
ED Entered STN: 20000114
Last Updated on STN: 20000114
Entered Medline: 20000106

L7 ANSWER 7 OF 29 SCISEARCH COPYRIGHT 2002 ISI (R)
AN 2002:291039 SCISEARCH
GA The Genuine Article (R) Number: 536LJ
TI Uncoupling protein-2: evidence for its function as a metabolic regulator
AU Saleh M C; Wheeler M B; Chan C B (Reprint)
CS Univ Prince Edward Isl, Dept Anat & Physiol, 550 Univ Ave, Charlottetown, PE C1A 4P3, Canada (Reprint); Univ Prince Edward Isl, Dept Anat & Physiol, Charlottetown, PE C1A 4P3, Canada; Univ Toronto, Dept Physiol & Med, Toronto, ON, Canada
CYA Canada
SO DIABETOLOGIA, (**FEB 2002**) Vol. 45, No. 2, pp. 174-187.
Publisher: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010 USA.
ISSN: 0012-186X.
DT General Review; Journal
LA English
REC Reference Count: 149
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L7 ANSWER 8 OF 29 SCISEARCH COPYRIGHT 2002 ISI (R)
AN 1999:885412 SCISEARCH
GA The Genuine Article (R) Number: 254KX
TI Import of carrier proteins into mitochondria
AU Truscott K N; Pfanner N (Reprint)
CS UNIV FREIBURG, INST BIOCHEM & MOL BIOL, HERMANN-HERDER-STR 7, D-79104 FREIBURG, GERMANY (Reprint); UNIV FREIBURG, INST BIOCHEM & MOL BIOL, D-79104 FREIBURG, GERMANY
CYA GERMANY
SO BIOLOGICAL CHEMISTRY, (**OCT 1999**) Vol. 380, No. 10, pp. 1151-1156.
Publisher: WALTER DE GRUYTER & CO, GENTHINER STRASSE 13, D-10785 BERLIN, GERMANY.
ISSN: 1431-6730.
DT General Review; Journal
FS LIFE
LA English
REC Reference Count: 39
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L7 ANSWER 9 OF 29 LIFESCI COPYRIGHT 2002 CSA
AN 2000:48121 LIFESCI
TI Non-mitochondrial ATP transport
AU Winkler, H.H.; Neuhaus, H.E.
SO Trends in Biochemical Sciences [Trends Biochem. Sci.], (**19990200**) vol. 24, no. 2, pp. 64-68.
ISSN: 0968-0004.
DT Journal
FS G
LA English
SL English

L7 ANSWER 10 OF 29 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2002018504 EMBASE
TI Uncoupling proteins - How do they work and how are they regulated.
AU Klingenberg M.
CS M. Klingenberg, Institute of Physical Biochemistry, University of Munich, Schillerstrasse 44, D-80336 Munich, Germany. klingenberg@pbm.med.uni-muenchen.de
SO IUBMB Life, (2002) 52/3-5 (175-179).
Refs: 40
ISSN: 1521-6543 CODEN: IULIF8

CY United States
DT Journal; General Review
FS 029 Clinical Biochemistry
LA English
SL English

=> s l6 and py<1998
2 FILES SEARCHED...
5 FILES SEARCHED...
7 FILES SEARCHED...
L8 39 L6 AND PY<1998

=> d 1-10

L8 ANSWER 1 OF 39 MEDLINE
AN 96255125 MEDLINE
DN 96255125 PubMed ID: 8691742
TI Structural and functional aspects of the phosphate carrier from mitochondria.
AU Kramer R
CS Institut fur Biotechnologie 1, Forschungszentrum Julich GmbH, Germany.
SO KIDNEY INTERNATIONAL, **(1996 Apr)** 49 (4) 947-52. Ref: 55
Journal code: KVB; 0323470. ISSN: 0085-2538.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199608
ED Entered STN: 19960911
Last Updated on STN: 19960911
Entered Medline: 19960829

L8 ANSWER 2 OF 39 LIFESCI COPYRIGHT 2002 CSA
AN 87:67591 LIFESCI
TI Biochemistry of the neurotoxic action of MPTP: Or how a faulty batch of "designer drug" led to parkinsonism in drug abusers.
AU Singer, T.P.; Trevor, A.J.; Castagnoli, N.,Jr.
CS Mol. Biol. Div., Veterans Adm. Med. Cent., San Francisco, CA 94121, USA
SO TRENDS BIOCHEM. SCI., (**1987**) vol. 12, no. 7, pp. 266-270.
DT Journal
TC General Review
FS X
LA English
SL English

L8 ANSWER 3 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 97263664 EMBASE
DN 1997263664
TI GSH transport in mitochondria: Defense against TNF-induced oxidative stress and alcohol-induced defect.
AU Fernandez-Checa J.C.; Kaplowitz N.; Garcia-Ruiz C.; Colell A.; Miranda M.; Mari M.; Ardite E.; Morales A.
CS J.C. Fernandez-Checa, Liver Unit, Hospital Clinic i Provincial, Villarroel 170, 08036 Barcelona, Spain
SO American Journal of Physiology - Gastrointestinal and Liver Physiology, (1997) 273/1 36-1 (G7-G17).
Refs: 85
ISSN: 0193-1857 CODEN: APGPDF
CY United States
DT Journal; General Review
FS 002 Physiology
029 Clinical Biochemistry
LA English
SL English

L8 ANSWER 4 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AN 96131968 EMBASE
DN 1996131968
TI [The direct triiodothyronine mitochondrial pathway: Myth or reality?]. LA VOIE D'ACTION MITOCHONDRIALE DIRECTE DE LA TRIIODOTHYRONINE: MYTHE OU REALITE?.
AU Wrutniak C.; Cabello G.
CS Inra, Lab differenciation cell. croissance, Unite d'endocrinologie cellulaire, 2 place Viala,34060 Montpellier Cedex 1, France
SO Medecine/Sciences, (1996) 12/4 (475-484).
ISSN: 0767-0974 CODEN: MSMSE4
CY France
DT Journal; General Review
FS 003 Endocrinology
029 Clinical Biochemistry
LA French
SL French; English

L8 ANSWER 5 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 94014161 EMBASE
DN 1994014161
TI Functional properties of purified and reconstituted mitochondrial metabolite carriers.
AU Palmieri F.; Indiveri C.; Bisaccia F.; Kramer R.
CS Biochemistry/Molecular Biology Lab., Department of Pharmaco-Biology, University of Bari,Bari, Italy
SO Journal of Bioenergetics and Biomembranes, (1993) 25/5 (525-535).
ISSN: 0145-479X CODEN: JBBID4
CY United States
DT Journal; General Review
FS 029 Clinical Biochemistry
LA English
SL English

L8 ANSWER 6 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 94014160 EMBASE
DN 1994014160
TI The mitochondrial tricarboxylate carrier.
AU Azzi A.; Glerum M.; Koller R.; Mertens W.; Spycher S.
CS Institut Biochemie/Molekularbiologie, Universitat Bern, Buhlstrasse 28,3012 Bern, Switzerland
SO Journal of Bioenergetics and Biomembranes, (1993) 25/5 (515-524).
ISSN: 0145-479X CODEN: JBBID4
CY United States
DT Journal; General Review
FS 029 Clinical Biochemistry
LA English
SL English

L8 ANSWER 7 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 94014159 EMBASE
DN 1994014159
TI Structure, function and regulation of the tricarboxylate transport protein from rat liver mitochondria.
AU Kaplan R.S.; Mayor J.A.
CS Department of Pharmacology, College of Medicine, University of South Alabama,Mobile, AL 36688, United States
SO Journal of Bioenergetics and Biomembranes, (1993) 25/5 (503-514).
ISSN: 0145-479X CODEN: JBBID4
CY United States
DT Journal; General Review
FS 029 Clinical Biochemistry
LA English
SL English

L8 ANSWER 8 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 94014158 EMBASE
DN 1994014158
TI Transmembrane topology, genes, and biogenesis of the mitochondrial phosphate and oxoglutarate carriers.

AU Palmieri F.; Bisaccia F.; [redacted]bbianco L.; Dolce V.; Fiermont ; Iacobazzi V.; Zara V.
CS Biochemistry/Molecular Biology Lab., Department of Pharmaco-Biology, University of Bari, Via E. Orabona, 4,Bari, Italy
SO Journal of Bioenergetics and Biomembranes, (1993) 25/5 (493-501).
ISSN: 0145-479X CODEN: JBBID4
CY United States
DT Journal; General Review
FS 029 Clinical Biochemistry
LA English
SL English

L8 ANSWER 9 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 93160999 EMBASE
DN 1993160999
TI The **mitochondrial carrier** family of transport proteins: Structural, functional, and evolutionary relationships.
AU Kuan J.; Saier Jr. M.H.
CS Department of Biology, University of California,San Diego, CA 92093-0116, United States
SO Critical Reviews in Biochemistry and Molecular Biology, (1993) 28/3 (209-233).
ISSN: 1040-9238 CODEN: CRBBEJ
CY United States
DT Journal; General Review
FS 022 Human Genetics
029 Clinical Biochemistry
LA English
SL English

L8 ANSWER 10 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 91211510 EMBASE
DN 1991211510
TI Molecular studies of the uncoupling protein.
AU Ricquier D.; Casteilla L.; Bouillaud F.
CS Centre de Recherche, l'Endocrinologie Moleculaire, et le Developpement, CNRS, 9 rue Jules Hetzel,F-92190 Meudon, France
SO FASEB Journal, (1991) 5/9 (2237-2242).
ISSN: 0892-6638 CODEN: FAJOEC
CY United States
DT Journal; General Review
FS 002 Physiology
029 Clinical Biochemistry
LA English
SL English

=> d 11-20

L8 ANSWER 11 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 90068336 EMBASE
DN 1990068336
TI Mechanism and evolution of the uncoupling protein of brown adipose tissue.
AU Klingenberg M.
CS Institut fur Physikalische Biochemie, Universitat Munchen, Goethestrasse 33, 8000 Munchen 2, Germany
SO Trends in Biochemical Sciences, (1990) 15/3 (108-112).
ISSN: 0376-5067 CODEN: TBSCDB
CY United Kingdom
DT Journal; General Review
FS 029 Clinical Biochemistry
LA English
SL English

L8 ANSWER 12 OF 39 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 88179157 EMBASE
DN 1988179157
TI Regulation of the mitochondrial adenine nucleotide pool size in liver: Mechanism and metabolic role.

AU Aprille J.R.
CS Mitochondrial Physiology Unit, Department of Biology, Tufts University, Medford, MA 02155, United States
SO FASEB Journal, (1988) 2/10 (2547-2556).
ISSN: 0892-6638 CODEN: FAJOEC
CY United States
DT Journal
FS 002 Physiology
029 Clinical Biochemistry
LA English
SL English

L8 ANSWER 13 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:519229 HCAPLUS
DN 125:160464
TI Role of nutrition in the survival after hepatotoxic injury
AU Chanda, Sanjay; Mehendale, Harihara M.
CS Division of Toxicology, Northeast Louisiana Univ., Monroe, LA, 71209-0470, USA
SO Toxicology (**1996**), 111(1-3), 163-178
CODEN: TXCYAC; ISSN: 0300-483X
DT Journal; General Review
LA English

L8 ANSWER 14 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:399738 HCAPLUS
DN 125:135473
TI The yeast ADP/ATP carrier. Mutagenesis and second-site revertants
AU Nelson, David R.
CS Department of Biochemistry, The University of Tennessee, Memphis, TN, 38163, USA
SO Biochim. Biophys. Acta (**1996**), 1275(1/2), 133-137
CODEN: BBACAQ; ISSN: 0006-3002
DT Journal; General Review
LA English

L8 ANSWER 15 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:399737 HCAPLUS
DN 125:135472
TI Mitochondrial metabolite transporters
AU Palmieri, F.; Bisaccia, F.; Capobianco, L.; Dolce, V.; Fiermonte, G.; Iacobazzi, V.; Indiveri, C.; Palmieri, L.
CS Department of Pharmaco-Biology, Laboratory of Biochemistry and Molecular Biology, University of Bari and CNR Unit for the Study of Mitochondria and Bioenergetics, Bari, Italy
SO Biochim. Biophys. Acta (**1996**), 1275(1/2), 127-132
CODEN: BBACAQ; ISSN: 0006-3002
DT Journal; General Review
LA English

L8 ANSWER 16 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:140228 HCAPLUS
DN 124:196531
TI Structure-function relationships in the **mitochondrial carrier** family
AU Klingenberg, M.; Nelson, D.
CS Institute Physical Biochemistry, University Munich, Munich, D-80336, Germany
SO Biochem. Cell Membr. (**1995**), 191-219. Editor(s): Papa, Sergio; Tager, Joseph M. Publisher: Birkhaeuser, Basel, Switz.
CODEN: 62LBAC
DT Conference; General Review
LA English

L8 ANSWER 17 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:956016 HCAPLUS
DN 124:3135
TI 25 Years gated pore mechanism - where are we now?
AU Klingenberg, Martin

CS Institute Physical Biochem[illegible]y, University Munich, Munich, 36, Germany
SO Prog. Cell Res. (**1995**), 5(Thirty Years of Progress in Mitochondrial Bioenergetics and Molecular Biology), 65-70
CODEN: PRCREB; ISSN: 0924-8315
DT Journal; General Review
LA English

L8 ANSWER 18 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:557550 HCAPLUS
DN 123:3478
TI **Mitochondrial carrier** family: ADP/ATP carrier as a carrier paradigm
AU Klingenberg, Martin
CS Institute for Physical Biochemistry, University of Munich, Munich, W-8000/2, Germany
SO Soc. Gen. Physiol. Ser. (**1993**), 48, 201-12
CODEN: SGPHAW; ISSN: 0094-7733
DT Journal; General Review
LA English

L8 ANSWER 19 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:527924 HCAPLUS
DN 121:127924
TI **Mitochondrial carrier** proteins
AU Palmieri, F.
CS Department of Pharmaco-Biology, Laboratory of Biochemistry and Molecular Biology, University of Bari, Bari, Italy
SO FEBS Lett. (**1994**), 346(1), 48-54
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal; General Review
LA English

L8 ANSWER 20 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:465724 HCAPLUS
DN 119:65724
TI Metabolite carriers in mitochondria
AU Kraemer, Reinhard; Palmieri, Ferdinando
CS Inst. Biotechnol. I, Forschungszent. Juelich, Juelich, Germany
SO New Compr. Biochem. (**1992**), 23(Molecular Mechanisms in Bioenergetics), 359-84
CODEN: NCBIDL; ISSN: 0167-7306
DT Journal; General Review
LA English

=> d 21-30

L8 ANSWER 21 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:54371 HCAPLUS
DN 118:54371
TI Glutamine transport in rat kidney mitochondria
AU Passarella, S.; Atlante, A.; Quagliariello, E.
CS Dip. Sci. Anim., Veg. Ambiente, Univ. Molise, Campobasso, Italy
SO Dev. Biochem. (**1992**), 29(Mol. Mech. Transp.), 143-50
CODEN: DEBIDR; ISSN: 0165-1714
DT Journal; General Review
LA English

L8 ANSWER 22 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:586727 HCAPLUS
DN 117:186727
TI The mitochondrial transporter family
AU Walker, John E.
CS Lab. Mol. Biol., Med. Res. Counc., Cambridge, CB2 2QH, UK
SO Curr. Opin. Struct. Biol. (**1992**), 2(4), 519-26
CODEN: COSBEF
DT Journal; General Review
LA English

L8 ANSWER 23 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:652513 HCAPLUS
DN 115:252513
TI Molecular studies on the uncoupling protein of brown adipose tissue
AU Ricquier, D.; Bouillaud, F.; Casteilla, L.; Cassard, A. M.; Champigny, O.; Klaus, S.; Raimbault, S.; Forest, C.; Miroux, B.; et al.
CS Cent. Rech. Endocrinol. Mol. Dev., Cent. Natl. Rech. Sci., Meudon, F-92190, Fr.
SO Prog. Obes. Res. (**1991**), Volume Date 1990 119-26
CODEN: POBREJ; ISSN: 0962-7936
DT Journal; General Review
LA English

L8 ANSWER 24 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:466869 HCAPLUS
DN 115:66869
TI A **mitochondrial carrier** family for solute transport
AU Klingenberg, Martin
CS Inst. Phys. Biochem., Univ. Munich, Munich, 8000/2, Fed. Rep. Ger.
SO Bioenerg.: Mol. Biol., Biochem., Pathol., [Proc. Int. Symp.] (**1990**), Meeting Date 1989, 241-9. Editor(s): Kim, Chong H.; Ozawa, Takayuki. Publisher: Plenum, New York, N. Y.
CODEN: 57GEAK
DT Conference; General Review
LA English

L8 ANSWER 25 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1989:207906 HCAPLUS
DN 110:207906
TI Molecular aspects of isolated and reconstituted carrier proteins from animal mitochondria
AU Kraemer, Reinhard; Palmieri, Ferdinando
CS Inst. Phys. Biochem., Univ. Munich, Munich, Fed. Rep. Ger.
SO Biochim. Biophys. Acta (**1989**), 974(1), 1-23
CODEN: BBACAQ; ISSN: 0006-3002
DT Journal; General Review
LA English

L8 ANSWER 26 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1989:168134 HCAPLUS
DN 110:168134
TI The **mitochondrial carrier** family involved in energy transduction
AU Klingenberg, Martin
CS Inst. Phys. Biochem., Univ. Muenchen, Munich, 8000, Fed. Rep. Ger.
SO Dev. Bioenerg. Biomembr. (**1988**), 7(Mol. Basis Biomembr. Transp.), 141-53
CODEN: DBBID6; ISSN: 0166-0861
DT Journal; General Review
LA English

L8 ANSWER 27 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1988:126726 HCAPLUS
DN 108:126726
TI Molecular basis of carrier action exemplified with three mitochondrial solute carriers
AU Klingenberg, M.; Aquila, H.; Link, T. A.
CS Inst. Phys. Biochem., Univ. Munich, Munich, 8000, Fed. Rep. Ger.
SO Chem. Scr. (**1987**), 27B, 41-5
CODEN: CSRPB9; ISSN: 0004-2056
DT Journal; General Review
LA English

L8 ANSWER 28 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1987:115306 HCAPLUS
DN 106:115306
TI Solute carriers involved in energy transfer of mitochondria form a homologous protein family
AU Aquila, Heinrich; Link, Thomas A.; Klingenberg, Martin

CS Inst. Phys. Biochem., Univ[redacted]nich, Munich, 8000/2, Fed. Re[redacted]er.
SO FEBS Lett. (**1987**), 212(1), 1-9
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal; General Review
LA English

L8 ANSWER 29 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:585976 HCAPLUS
DN 105:185976
TI Functional interaction of anions and cations with the reconstituted adenine nucleotide carrier from mitochondria
AU Kraemer, Reinhard
CS Inst. Phys. Biochem., Univ. Muenchen, Munich, Fed. Rep. Ger.
SO Ion Interact. Energy Transfer Biomembr., [Proc. Int. Workshop] (**1986**), Meeting Date 1985, 55-64. Editor(s): Papageorgiou, George C.; Barber, James; Papa, Sergio. Publisher: Plenum, New York, N. Y.
CODEN: 55DNAI
DT Conference; General Review
LA English

L8 ANSWER 30 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:125113 HCAPLUS
DN 104:125113
TI Molecular aspects of structure-function relationships in mitochondrial adenine nucleotide carrier
AU Vignais, Pierre V.; Block, Marc R.; Boulay, Francois; Brandolin, Gerard; Lauquin, Guy J. M.
CS Dep. Rech. Fondam., Cent. Etud. Nucl., Grenoble, Fr.
SO Struct. Prop. Cell Membr. (**1985**), Volume 2, 139-79. Editor(s): Benga, Gheorghe. Publisher: CRC, Boca Raton, Fla.
CODEN: 54TDAR
DT Conference; General Review
LA English

=> d 31-39

L8 ANSWER 31 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1982:487946 HCAPLUS
DN 97:87946
TI The use of detergents for the isolation of intact carrier proteins, exemplified by the ADP, ATP carrier of mitochondria
AU Klingenberg, M.
CS Inst. Phys. Biochem., Univ. Munich, Munich, 8000/2, Fed. Rep. Ger.
SO Membr. Transp. (**1982**), Volume 1, 203-9. Editor(s): Martonosi, Anthony N. Publisher: Plenum, New York, N. Y.
CODEN: 48ETAH
DT Conference; General Review
LA English

L8 ANSWER 32 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1980:36013 HCAPLUS
DN 92:36013
TI Substrate induced interconversion of the inhibitor complexes of the ADP/ATP carrier in solution - a model system for the transport across the membrane
AU Aquila, H.; Klingenberg, M.
CS Inst. Phys. Biochem., Univ. Muenchen, Munich, 8000/2, Fed. Rep. Ger.
SO Dev. Bioenerg. Biomembr. (**1979**), 3(Funct. Mol. Aspects Biomembr. Transp.), 305-8
CODEN: DBBID6; ISSN: 0166-0861
DT Journal; General Review
LA English

L8 ANSWER 33 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1979:451138 HCAPLUS
DN 91:51138
TI Possible calcium carrier from the inner membrane of calf heart mitochondria

AU Shamoo, Adil E.; Jeng, Arc[redacted]
CS Dep. Radiat. Biol. Biophys., Univ. Rochester, Rochester, NY, 14642, USA
SO Ann. N. Y. Acad. Sci. (**1978**), 307, 235-7
CODEN: ANYAA9; ISSN: 0077-8923
DT Journal; General Review
LA English

L8 ANSWER 34 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1978:592566 HCAPLUS
DN 89:192566
TI Transport catalysis and biomembranes. Explanation and examples of ADP-ATP carriers in mitochondria
AU Klingenberg, M.
CS Inst. Phys. Biochem., Univ. Muenchen, Munich, Ger.
SO Naturwissenschaften (**1978**), 65(9), 456-61
CODEN: NATWAY; ISSN: 0028-1042
DT Journal; General Review
LA German

L8 ANSWER 35 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1977:464154 HCAPLUS
DN 87:64154
TI The adenine-nucleotide carrier in mitochondria
AU Vignais, P. V.; Brandolin, G.; Lauquin, G.; Morel, F.; Vignais, P. M.
CS Dep. Rech. Fondam. Biochim., CEN, Grenoble, Fr.
SO Biomembr. - Lipids, Proteins Recept., Proc. NATO Adv. Study Inst. (**1975**), Meeting Date 1974, 167-89. Editor(s): Burton, Robert M.; Packer, Lester. Publisher: BI-Sci. Publ. Div., Webster Groves, Mo.
CODEN: 35YTAH
DT Conference; General Review
LA English

L8 ANSWER 36 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1977:184605 HCAPLUS
DN 86:184605
TI The ADP-ATP carrier in mitochondrial membranes
AU Klingenberg, Martin
CS Inst. Physiol. Chem. Phys. Biochem., Univ. Muenchen, Munich, Ger.
SO Enzymes Biol. Membr. (**1976**), Volume 3, 383-438. Editor(s): Martonosi, Anthony. Publisher: Plenum, New York, N. Y.
CODEN: 35HDAK
DT Conference; General Review
LA English

L8 ANSWER 37 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1976:473520 HCAPLUS
DN 85:73520
TI Carrier-mediated transport of metabolites in mitochondria
AU Fonyo, Attila; Palmieri, Ferdinando; Quagliariello, Ernesto
CS Exp. Res. Dep., Med. Univ. Budapest, Budapest, Hung.
SO Horiz. Biochem. Biophys. (**1976**), 2, 60-105
CODEN: HZBBAO
DT Journal; General Review
LA English

L8 ANSWER 38 OF 39 HCAPLUS COPYRIGHT 2002 ACS
AN 1976:402203 HCAPLUS
DN 85:2203
TI Biochemical genetic studies of oxidative phosphorylation
AU Griffiths, David E.
CS Dep. Mol. Sci., Univ. Warwick, Coventry, Engl.
SO Mitochondria: Bioenerg., Biog. Membr. Struct. (**1976**), 265-74. Editor(s): Packer, Lester; Gomez-Puyou, Armando. Publisher: Academic, New York, N. Y.
CODEN: 33BMA3
DT Conference; General Review
LA English

L8 ANSWER 39 OF 39 HCAPLUS COPYRIGHT 2002 ACS

AN 1968:416112 HCAPLUS
DN 69:16112
TI Systems used for the transport of substrates into mitochondria
AU Chappell, J. B.
CS Univ. Bristol, Bristol, Engl.
SO Brit. Med. Bull. (**1968**), 24(2), 150-7
    CODEN: BMBUAQ
DT Journal; General Review
LA English

```
=> s l8 (10a) (motif or consensus)
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L75 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L77 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L79 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L81 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L83 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L85 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L87 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L89 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L91 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L93 (10A) '
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L95 (10A) '
L9            0 L8 (10A) (MOTIF OR CONSENSUS)

=> dis his

     (FILE 'HOME' ENTERED AT 18:06:14 ON 23 APR 2002)

     FILE 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS,
     NTIS, ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 18:06:34 ON 23 APR 2002
L1         1292 S MITOCARRIER OR MITOCHONDRIA? CARRIER
L2           69 S L1 (10A)(MOTIF OR CONSENSUS)
L3           11 DUP REM L2 (58 DUPLICATES REMOVED)
L4            0 S L1 (10A)(MOTIF OR CONSENSUS) AND REVIEW
L5          125 S L1 AND REVIEW
L6           67 DUP REM L5 (58 DUPLICATES REMOVED)
L7           29 S L6 AND PY>1996
L8           39 S L6 AND PY<1998
L9            0 S L8 (10A) (MOTIF OR CONSENSUS)

=> log h
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   208.42     208.63

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -1.24      -1.24

 SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 18:40:57 ON 23 APR 2002
```